RITE-HITE®

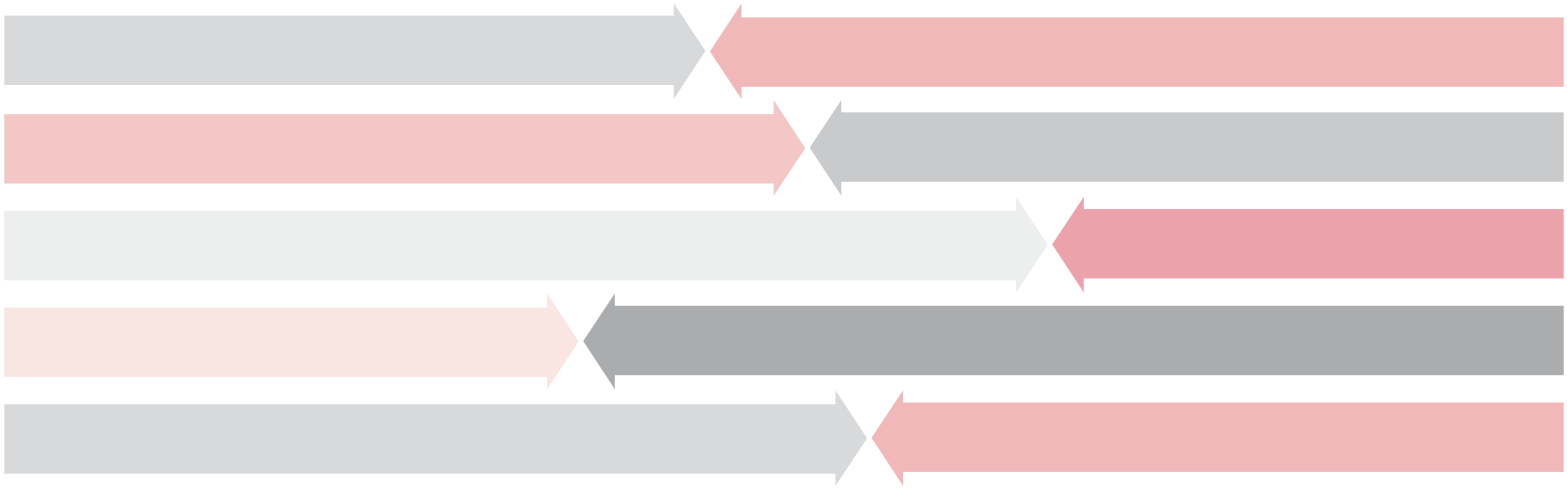
ALWAYS LOOKING AHEAD

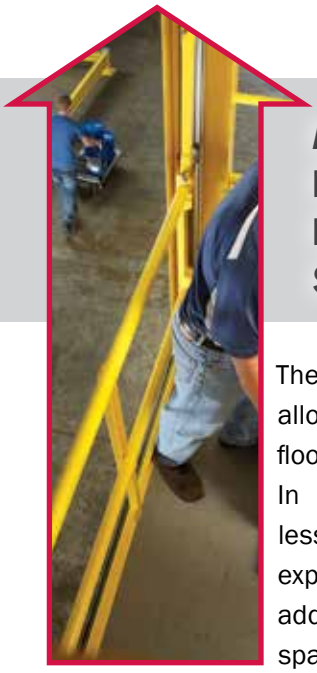
UPWARD EXPANSION:

The safety and security of workers takes on new heights as more companies add elevated work platforms and multi-level work environments.

November 2013

WHITE PAPER





AS COMPANIES LOOK TO MAXIMIZE EXISTING SPACE WITHIN THEIR FACILITIES, MANY ARE TURNING TO MEZZANINES, ELEVATED WORK PLATFORMS, OR MULTI-LEVEL RACKING SYSTEMS TO CREATE ADDITIONAL STORAGE SPACE OR WORK AREAS FOR EMPLOYEES.

These multi-level work environments allow companies to expand useable floor space above existing operations. In many cases, expanding "up" is less costly and time-consuming then expanding "out," which usually means adding onto existing space, leasing new space or constructing a new facility.

Multi-level environments create a number of advantages and efficiencies for companies; however, there are areas of concern that must be addressed. Unprotected mezzanines or multi-level environments pose a high risk for employee-related falls. According to the Occupational Safety and Health Administration (OSHA), falls are among the most common cause of serious work-related injuries and deaths. In 2011, 666 workers were killed in the U.S. from falls, slips, or trips accounting for 14 percent of all fatal work injuries. Falls to a lower level accounted for 541 of those fatalities.[1]

OSHA REGULATIONS VS. ANSI STANDARDS

OSHA is a division of the U.S. Department of Labor and is charged with developing and enforcing safety standards within the work environment. OSHA regulations are law and must be followed by employers and their workforce. Since OSHA is charged with regulating a wide variety of industries, it is difficult for the administration to stay on top of rapidly-evolving changes within specific industries. As a result, many safety-minded companies look to organizations like the American National Standards Institute (ANSI) for "best practices." ANSI promotes voluntary consensus standards that are widely recognized as comprehensive and reliable when it comes to workplace safety. ANSI standards are up-to-date and provide specific direction on how to maximize workplace safety. Compliance with ANSI standards ensures that companies are implementing the most advanced safety standards in their respective industries.

In 2011, 666 workers were killed in the U.S. from falls, slips, or trips accounting for 14 percent of all fatal work injuries. Falls to a lower level accounted for 541 of those fatalities.

In 2009, ANSI issued a standard entitled: *Specification for the Design, Manufacture and Installation of Industrial Work Platforms* (MH28.3: 2009). The standard states the following: *An industrial work platform is a prefabricated elevated platform (e.g., mezzanine) located in an industrial environment, pre-designed using a steel framing system. Flooring may include other structural or non-structural elements such as, but not limited to, concrete, steel, and/or engineered wood products. This new Specification is intended to be applied to the design, manufacturing, installation, and maintenance of such structures.*[2]

SECTION 6.4.3 OF THE STANDARD GOES ON TO STATE:

Any gate that provides an access opening through the guards for the purpose of loading and unloading material onto a work platform shall be designed such that the elevated surface is protected by guards at all times. Gates that swing open, slide open, or lift out leaving an unprotected open in the guarding are not acceptable.

SOLUTIONS

Based on current standards, industrial mezzanines must have handrails and gates around all edges; however, these gates need to be opened from time-to-time to accommodate the loading and unloading process. According to the ANSI standard, there must be full-time protection when loading and unloading materials from an elevated platform. There can be no exposed areas where an employee could potentially fall. As a result, many companies are seeking a solution to secure elevated work environments.

One solution is the GateKeeper™ Mezzanine Safety Gate from Rite-Hite. The GateKeeper is a dual reciprocating barrier that makes elevated platform loading and unloading safer. It creates a controlled access area in which the inner gate and outer gate cannot be opened at the same time. The GateKeeper's exclusive link bar design ensures that both gates always work in unison.

When the outer gate opens to allow pallets to enter the mezzanine, the inner gate automatically closes to keep workers out. After the pallet is received, mezzanine-level workers open the inner gate to remove material from the work zone while the outer gate closes to secure the leading edge of the platform. To prevent the outer gate from being raised by a worker inside the work zone, a Saf-T-Latch is integrated that can only be accessed when standing outside the work zone.

The GateKeeper is constructed from heavy-duty steel and aluminum and features a raised toe board to prevent materials from accidently being pushed off the elevated edge. The link bars, which control the gate opening and closing, run along protected, three-inch tracks with nylon rollers, making gate operation smooth and easy for workers. The product comes in a variety of sizes to accommodate wide range of applications. A fully automatic version is also available.

THE GATEKEEPER IS A DUAL-RECIPROCATING BARRIER THAT MAKES ELEVATED WORK PLATFORM LOADING AND UNLOADING SAFER.

- **INNER AND OUTER GATES CANNOT BE OPENED AT THE SAME TIME**
- **SAF-T-LATCH PREVENTS THE GATE FROM BEING OPENED INSIDE THE WORK ZONE**
- **RAISED TOE BOARD PREVENTS MATERIALS FROM BEING PUSHED OFF THE EDGE**
- **CONSTRUCTED FROM HEAVY-DUTY STEEL AND ALUMINUM**
- **AVAILABLE IN A VARIETY OF SIZES**

THE RACKEEPER (SHOWN ABOVE) IS DESIGNED FOR MULTI-LEVEL WORK ENVIRONMENTS. IT'S DESIGNED TO FIT WITHIN AN EXISTING RACK STRUCTURE, WHICH HELPS MINIMIZE THE FOOTPRINT IN EXISTING OR NEW INSTALLATION RACK BAYS.

In addition to mezzanines and elevated work platforms, many companies are integrating multi-level pick modules within their facilities to handle order fulfillment. Pick modules are generally constructed using a metal support structure, flooring, stairways, handrails, and landings. Products are stored in shelving and racks and are "picked" to conveyors, totes, carts, and other transportation systems.

Multi-level rack systems pose a number of challenges when it comes to securing open areas during the loading and unloading process. The work areas are typically very small and are contained within the rack system itself, which makes it difficult to integrate traditional barrier designs.

To help solve this challenge, Rite-Hite developed the RacKeeper™ Safety Gate. It functions similarly to the GateKeeper; however, it utilizes the existing rack structure to minimize the footprint in existing or new installation rack bays. The RacKeeper can accommodate rack openings up to 13 feet 6 inches wide, 9 feet high and 8 feet 6 inches deep, which means it can fit within virtually any type of rack configuration.

The RacKeeper and the GateKeeper meet applicable OSHA, ANSI and IBC standards, including the ANSI standard for elevated work platforms (MH28.3: 2009).

If your business is exploring mezzanines, elevated work platforms, or multi-level racking systems, call Rite-Hite to learn more about current standards and regulations. In addition, Rite-Hite representatives are available to analyze and recommended safety solutions based on your specific needs. Visit RiteHite.com or call 800-456-0600 to learn more.

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[1] Bureau of Labor Statistics. U.S. Department of Labor. National Census of Fatal Occupational Injuries in 2011. News Release, 2012. Print. <http://www.bls.gov/news.release/pdf/cfoi.pdf>.

[2] American National Standard Institute (ANSI. Specification for the Design, Manufacture and Installation of Industrial Work Platforms (MH28.3: 2009). 2009. Print.